

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. *(Currently Amended)* A method of reducing interferences in an electrochemical sensor comprising:

measuring a first current at a first working electrode, said first working electrode having an area being covered by a reagent layer;

measuring a second current at a second working electrode, ~~wherein said reagent layer partially covers said second working electrode, said second working electrode~~ having a covered area coated by the reagent layer and an uncovered area not coated by the reagent layer such that interferant current produced at the uncovered area is proportional to interferant current produced overall; and

calculating a corrected current value representative of a glucose concentration using a ratio of said covered area to said uncovered area of said second working electrode to reduce the effects of interferants.

2. *(Original)* The method of claim 1, wherein said corrected current value is calculated using the equation:

$$G = WE_1 - \left\{ \left(\frac{A_{cov}}{A_{unc}} \right) X (WE_2 - WE_1) \right\}$$

where G is the corrected current value, WE_1 is the uncorrected current density at said first working electrode, WE_2 is the uncorrected current density at said second working electrode, A_{cov} is the coated area of said second working electrode, and A_{unc} is the uncoated area of said second working electrode.

3. *(Currently Amended)* A method of reducing interferences in an electrochemical sensor comprising:

measuring a ~~second~~ first current at a first working electrode, wherein said reagent layer

partially covers said first working electrode, said first working electrode having a first ~~covered~~ coated area covered by said reagent layer and a first ~~uncovered-uncoated area not covered by said reagent layer~~;

measuring a second current at a second working electrode, wherein said reagent layer partially covers said second working electrode, said second working electrode having a second covered area coated by said reagent layer and a second uncovered area not coated by said reagent layer such that interferant current produced at the uncovered area is proportional to interferant current produced overall; and

calculating a corrected current value representative of a glucose concentration using a ratio of said covered area to said uncovered area of said first and said second working electrodes to reduce the effects of interferants.

4. (*Currently Amended*) The method of Claim 3, wherein said corrected current value is calculated using the equation:

$$G = WE_1 - \left\{ \left(\frac{f_1 + f_2}{f_2 - 1} \right) \times (WE_2 - WE_1) \right\} \quad [(\text{Eq 7e})]$$

where

$$f1 = \frac{A_{cov1}}{A_{unc1}};$$

$$f2 = \frac{A_{cov2}}{A_{unc2}};$$

A_{unc1} is an uncoated area of said first working electrode;

A_{unc2} is an uncoated area of said second working electrode;

A_{cov1} is a coated area of said first working electrode;

A_{cov2} is a coated area of said second working electrode;

G is the corrected current value;

WE_1 is the uncorrected current density at said first working electrode; and

WE_2 is the uncorrected density at said second working electrode.

5. (New) The method of claim 1, in which the interferant comprises one or more of acetaminophen, gentisic acid, uric acid, and combinations thereof.

6. (New) The method of one of claim 1 or claim 3, in which the interferant comprises one or more of acetaminophen, gentisic acid, uric acid, and combinations thereof.

7. (New) A method of reducing interferences in an electrochemical sensor having a first and second working electrodes disposed on a substrate and an insulation disposed over electrodes and the substrate, the insulation having an opening to allow a reagent to contact portions of the first and second working electrodes, the method comprising:

measuring a first current at a first working electrode, said first working electrode having an area coated by the reagent;

measuring a second current at a second working electrode having an area coated by the reagent and an area uncoated by the reagent such that interferant current produced at the uncoated area is proportional to interferant current produced overall; and

calculating a corrected current value representative of a glucose concentration using a ratio of said coated area to said uncoated area of said second working electrode to reduce the effects of interferants.

8. (New) The method of claim 7, in which said corrected current value is calculated using the equation:

$$G = WE_1 - \left\{ \left(\frac{A_{cov}}{A_{unc}} \right) X (WE_2 - WE_1) \right\}$$

where G is the corrected current value, WE_1 is the uncorrected current at said first working electrode, WE_2 is the uncorrected current at said second working electrode, A_{cov} is the coated

area of said second working electrode , and A_{unc} is the uncoated area of said second working electrode.

9. (New) A method of reducing interferences in an electrochemical sensor having a first and second working electrodes disposed on a substrate and an insulation disposed over electrodes and the substrate, the insulation having an opening to allow a reagent to contact portions of the first and second working electrodes, the method comprising:

measuring a first current at a first working electrode having a first coated area covered by the reagent and a first uncoated area not covered by the reagent;

measuring a second current at a second working electrode having a second covered area coated by said reagent and a second uncovered area not coated by said reagent such that interferant current produced at the uncovered area is proportional to interferant current produced overall; and

calculating a corrected current value representative of a glucose concentration using a ratio of said covered area to said uncovered area of said first and said second working electrodes to reduce the effects of interferences.

10. (New) The method of Claim 9, wherein said corrected current value is calculated using the equation:

$$G = WE_1 - \left\{ \left(\frac{f_1 + f_2}{f_2 - 1} \right) \times (WE_2 - WE_1) \right\}$$

where

$$f1 = \frac{A_{cov1}}{A_{unc1}} ;$$

$$f2 = \frac{A_{cov2}}{A_{unc2}} ;$$

A_{unc1} is an uncoated area of said first working electrode;

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A_{unc2} is an uncoated area of said second working electrode;

A_{cov1} is a coated area of said first working electrode;

A_{cov2} is a coated area of said second working electrode;

G is the corrected current value;

WE_1 is the uncorrected current density at said first working electrode; and

WE_2 is the uncorrected density at said second working electrode.